

## **AMENDMENT TO THE TITLE**

**Please amend the title to read as follows:**

--FLEXIBLE TUBULAR PIPE, ESPECIALLY FOR OIL PRODUCTION, HAVING A PTFE WINDING--.

## **AMENDMENT(S) TO THE SPECIFICATION**

**Please add a paragraph beginning at page 1, line 3:**

### **CROSS REFERENCE TO RELATED APPLICATION**

The present application is a 35 U.S.C. §§ 371 national phase conversion of PCT/FR2004/002612, filed 13 October 2004, which claims priority of French Application No. 0312162, filed 17 October 2003. The PCT International Application was published in the French language.

**Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:**

### **BACKGROUND OF THE INVENTION**

The present invention relates to a flexible tubular pipe of the unbonded type, intended especially for the offshore oil industry, for example for transporting hydrocarbons, and produced by independent successive layers consisting, on the one hand, of helical windings of various profiled strips and/or tapes, especially made of metal, and, on the other hand, of at least one sheath made of polymer material. The various successive layers have a certain degree of freedom in moving with respect to one another, thereby ensuring good flexibility of the pipe.

A standard type of such flexible oil pipes comprises, from the inside outward: an internal carcass consisting of a short-pitch helical winding of a profiled strip (generally a metal strip) in mutually interlocked turns; a polymeric internal sealing sheath, or pressure sheath, pressing on the carcass and thus able to withstand external pressures without the risk of being crushed; a set of armor plies consisting of helical windings of profiled strips and intended to withstand in particular the hoop

stress and the axial component of the internal pressure, and also the axial load due to the weight of the suspended pipe; and a polymeric external protective sheath. The set of armor plies is usually divided into two subsets more particularly responsible for taking up the radial stresses and the axial stresses respectively, namely the pressure vault and the tensile armor plies: the pressure vault is placed over the internal sealing sheath and is intended to withstand the external pressure but mainly the internal pressure developed by the fluid in the sealing sheath, and it generally comprises a short-pitch helical winding of an interlocked profiled wire (that is to say a winding with a wind angle of typically between 75° and about 90° to the axis of the pipe); the tensile armor plies are generally noninterlocked wires wound helically with a long pitch (i.e. with a lay angle of less than 55°) in at least two crossed plies on top of the pressure vault. However, in certain cases it is possible to have a set of armor plies consisting of only 55°-wound cross armor plies with no pressure vault.

**Please insert the following section heading at page 5, line 7:**

## **SUMMARY OF THE INVENTION**

**Please replace the paragraph beginning at page 6, line 19, with the following rewritten paragraph:**

In fields away from the oil industry, and especially away from the manufacture of flexible pipes, PTFE tapings have already been proposed. These are essentially in the electrical cable industry, as known for example from document US 4 791 966. One characteristic of these PTFE tapes is, firstly, that they are extremely thin, typically from 30 to 200 µm in thickness, and, secondly, they do not require, when being ~~processing~~ processed for this application, to be of great length nor to be butted together in the event of a breakage, in so far as this is of no consequence for the quality of the end-product. It is clear that such small thicknesses are incompatible with the manufacture of flexible pipes, dissuading a person skilled in the art from considering PTFE for this.

**Please replace the paragraph beginning at page 7, line 37, with the following rewritten paragraph:**

**BRIEF DESCRIPTION OF THE DRAWINGS**

Other features and advantages of the invention will become apparent from the following description of two embodiments, given with reference to the appended drawings in which:

- ~~figure~~ Figure 1 is a partial perspective view of one embodiment of a flexible pipe according to the invention, with an intermediate winding of PTFE tapes between the carcass and the internal sealing sheath; and
- ~~figure~~ Figure 2 is a partial perspective view of another embodiment of a flexible pipe according to the invention, with an intermediate winding of PTFE tapes between two armor plies.

**Please insert the following section heading at page 8, line 12:**

**DESCRIPTION OF THE PREFERRED EMBODIMENTS**

**Please replace the paragraph beginning at page 9, line 29, with the following rewritten paragraph:**

This intermediate layer may be provided between the cross armor plies themselves, as shown in figure ~~[[1]]~~ 2, and/or between pairs of such cross plies.